

Psychology 461/592, Spring, 2012  
Stress, Cognition and Health: An Integrative Approach  
MW 10:30-11:45

**Instructor:** Dr. Linda Chrosniak  
**Office:** David King Hall, 2045  
**Phone:** (703) 993-4139  
**E-mail:** [lchrosni@gmu.edu](mailto:lchrosni@gmu.edu) (quickest way to contact)  
**Office Hours:** Monday: 1:45-3:45 and by appointment.

**Text:** There is no required text but primary journal articles related to each week's topic are assigned as referenced on the last page of the syllabus. All articles are available online via the GMU library system or may be posted on Blackboard.

**Recommended Text:** Sapolsky, R. M. (2004), *Why Zebras Don't Get Ulcers* (3<sup>rd</sup> Edition), Henry Holt, New York. (We will refer to this book often in the class)

**Course Goals:** The course is designed to shed light on understanding the relationships between stress, cognition and health. The purpose is to examine these areas in an integrative fashion. We will examine issues such as: What factors contribute to stress? How does stress affect physical health? How do external and internal stressors influence health? What factors influence our ability to reduce stress in our lives? How do cognitive processes affect health and well-being? How do people cope with stress? Why is it so difficult to change unhealthy behaviors? We will primarily use a biopsychosocial model throughout this course.

**Course format:** Much of the class will consist of lectures containing information from the readings and information from other sources. In addition there may be in-class exercises that will facilitate application of the concepts presented in class. Other components of the class will include discussions, demonstrations and videos that may add to understanding of the material. Questions and comments are welcome throughout the class as time permits. It is expected that students will be fully involved in class discussions and in-class activities.

**Honor Code:** GMU has an Honors Code stating:

*To promote a stronger sense of mutual responsibility, respect, trust, and fairness among all members of the George Mason University community and with the desire for greater academic and personal achievement, we, the student members of the University Community have set forth this:*

Student members of the George Mason University community pledge not to cheat, plagiarize, steal, or lie in matters related to academic work. Please be sure that you are familiar with the GMU Honor Code as described in the catalog.

**COURSE REQUIREMENTS:**

- Some background in biopsychology and cognitive psychology is assumed.
- Keep up with the reading assignments.
- Students are responsible for all material covered in the assigned readings as well as information presented in the lectures.

**ATTENDANCE:** Class attendance is essential as course material covers both required readings and additional material presented in the lectures that may not be covered in your text. In any course, it has been my experience that students who attend class regularly generally earn higher

grades. It is in your best interest to attend class regularly. Participation is important and lack of attendance and participation will certainly affect your grade in this class. In addition, 10% of the grade is based on attendance and participation in class. Attendance will be recorded for each class meeting.

### **Psychology 461 Grading**

#### **Exams:**

There will be two exams: a mid-term exam worth 20% of the grade and a final exam worth 20% of the grade. The exams will be take-home exams consisting of several major integrative essay questions based on the readings and lecture material and other assignments and class discussions. The written answers are expected to be clear and somewhat comprehensive, integrating and applying the ideas and theories relevant to the course topics and should cite empirical evidence when applicable. The mid-term will cover material for the first half of the semester.

The final exam will cover material from the whole semester. This exam may include one or more questions that integrate application and theory. These questions will cover empirical findings and aspects of theory application. It is expected that students will further integrate the material from the course and to apply that to more “real world situations.”

#### **Projects (15% each)**

Two out-of-class projects will be required. Each project requires administering a survey or interviewing people about health stressors/behaviors and writing an “outcome” report. Specific guidelines will be distributed in class.

#### **Application/Final Project (20%)**

This project will require students to keep a weekly journal or diary of stressors or factors that influence their potential health and well-being (e.g., stress, daily hassles, sleep deprivation, work stressors) that affect their lives. It is expected that students have a minimum of three entries per week across the semester. At the end of the semester students will then compile a table showing categories of the factors and then, in a written paper, discuss the way these experienced and categorized factors are related to the findings and theories that were discussed in class during the semester. In other words, describe and relate how these situations may impact cognition, general health, coping, stress and behavior. The written “report” should be approximately 4-5 pages. Further Guidelines will be distributed in class.

#### **Participation (10%)**

This is an advanced class so attendance, preparation and participation are expected. Class participation will constitute 10% of the final grade in the course. Participation points will be assessed based on class attendance and the quality (not quantity) of contributions to class discussion. Students should be able to demonstrate that they are prepared for class discussions. In addition, in-class activities will also be included in the participation grade. Frequent late arrival to class may also affect the participation grade. Participation guidelines are listed below.

### **Psychology 592 Grading**

#### **Exams:**

Essays are expected to be more integrative and demonstrate graduate level of understanding.

#### **Projects- (10% each)**

Project write-ups should be theoretically integrative and demonstrate graduate level work. These will include additional pages and/or additional interviews or measures used in the projects.

**Application/Final Project (20%)**

This project will require students to keep a weekly journal or diary of stressors or factors that influence their potential health and well being (e.g., stress, daily hassles, sleep deprivation, work stressors) that affect their lives. It is expected that students have a minimum of three entries per week across the semester. At the end of the semester students will then compile a table showing categories of the factors and then, in a written paper, discuss the way these experienced and categorized factors are related to the findings and theories that were discussed in class during the semester. In other words, describe and related how these situations may impact cognition, general health, coping, stress and behavior. The written “report” should be approximately 5-6 pages. Specific guidelines will be distributed in class.

**Participation (10%)**

Graduate participation would be expected to be of the highest quality in terms of contributions to class discussions, preparation and attendance.

**Graduate Student Presentations**

Graduate students are expected to give a presentation on a topic related to their discipline. The in-class presentation is to integrate research on stress, health and/or cognitive processes within each student’s area of study. Topics will be finalized with the instructor. This assignment is a Pass/fail component of the grade. If a presentation is not successfully completed there will be a letter grade deduction for the final grade..

**Grading:** Final grades will be based on a 100-point scale.

93 – 100 = A	83 - 86 = B+	73 - 76 = C
90 - 92 = A-	80 - 82 = B-	70 - 72 = C-
87- 89 = B+	77 - 79 = C+	60 - 69 = D

Below 60 results in a grade of F

<b>Last Day to Add (Full Semester Course)</b>	<b>January 31, 2012</b>
<b>Last Day to Drop (Full Semester Course)</b>	<b>February 24, 2012</b>
<b>Elective Withdrawal Period (Full Semester Course)</b>	<b>Feb. 27- Mar. 30, 2012</b>

**Additional Information:**

If you are a student with a documented disability and require some academic accommodation, please see me and contact the Disability Resource Center (DRC) at (703)993-2474. All academic accommodations must be arranged through that office.

<b>Tentative Schedule*</b>		
<b>Date</b>	<b>Topic</b>	<b>Readings</b>
1/23	Welcome! Concepts of Stress: Stress Measures	
1/25-30	Theories of Stress Biology of Stress	Reading 1-2

2/1-6	Stress, Disease and Brain Damage (Neuroendocrine and Immune Systems) (Cardiovascular health and stress)	Reading 3-6
2/8 2/8-15	<b>(Project #1 assigned)</b> Effects of Environmental Stressors	Readings 7-13
2/20-22	Environmental Stressors: Sleep deprivation, work stress	Reading 14-19
2/27-29 <b>2/29</b>	Traits/States: Optimism, pessimism and hostility <b>Project 1 Due</b>	Readings 20-24
3/5-7	Schemas & Cognitive Styles: (Adaptive & maladaptive) Cognitive Vulnerabilities and health <b>Take-home Exam assigned</b>	Readings 25-29
3/12-14	<b>Spring Break (No Class)</b>	
<b>3/19</b>	<b>Take Home Exam due (beginning of class)</b>	
3/19-21	Finish Cognitive vulnerabilities and health <b>Project 1: Discussion</b>	Readings 30-33
3/19	<b>Project 2 assignment reminders</b>	
3/26-28 <b>3/28</b>	Coping and Environmental Resources <b>(Project # 2 due)</b>	Readings 34-36
4/2	Practical steps in coping	TBA
4/4-9 4/4	Health Beliefs <b>Reminder: Application Project</b>	TBA
4/11-16	Health Behavior Change	Readings 37
4/18-	Behavior Change: Why change is difficult	TBA
4/23	Personal Behavior Change Strategies <b>Discussion: Project 2</b>	Reading 38-39
4/25	Graduate Student Presentations Discussion	
4/30	Time Management & behavioral strategies for better health <b>Application Projects Due</b> <b>Take-Home Final distributed in class</b>	Reading 40
5/2	<b>Final Exam: Due at 10:30 a.m.</b>	

---

\* Any schedule changes (or changes in assignments) will be announced ahead of time in class and by e-mail. After an absence, students are responsible for contacting the instructor to obtain accurate information.

### Assigned Readings

1. McEwen, B. S. (2010). Stress, Adaptation and Disease. *Annals of the New York Academy of Science*, 538, 33-44.
2. Sapolsky, R. M. (2005). *Why Zebras Don't Get Ulcers*, Why Zebras Don't Get Ulcers (3<sup>rd</sup> Edition), Henry Holt, New York. Chapter 8, pp 144-185 (Recommended)
3. Sorrells, S. F., Caso, J. R., Munhoz, C. D., & Sapolsky, R. M. (2007). The stressed CNS: When glucocorticoids aggravate inflammation, *Neuron*, 64, 33-37.
4. Miller, G. E., Cohen, S., & Ritchey, A. K. (2002). Chronic psychological stress and the regulation of pro-inflammatory cytokines: A glucocorticoid-resistance model. *Health Psychology*, 21, 531-541.
5. Black, P. H., & Garbutt, L. D. (2002). Stress, inflammation, and cardiovascular disease, *Journal of Psychosomatic Research*, 52, 1-23.
6. Gianaros, P.J. et al (2007). Prospective reports of chronic life stress predict decreased grey matter volume in the hippocampus. *NeuroImage*, 35, 795-803.
7. Cho, K. (2001). Chronic "jet lag" produces temporal lobe atrophy and spatial cognitive deficits. *Nature Neuroscience*, 4, 567-568.
8. Thurston, R.C., & Kubzansky, L. D. (2007). Multiple sources of psychosocial disadvantage and risk of coronary heart disease. *Psychosomatic Medicine*, 69, 748-755.
9. Ford, E. S., Loucks, E. B., & Berkman, L.F. (2006). Social integration and concentrations of C-reactive protein among US Adults, *Annals of Epidemiology*, 16 (2), 78-84.
10. Uchino, B. N. (2006). Social Support and Health: A review of physiological processes potentially underlying links to disease outcome, *Journal of Behavioral Medicine*, 29, 377-387.
11. Greenwood, D. C., Muir, K. R., Packham, C. J., & Madeley, R. J., (1996). Coronary heart disease: a review of the role of psychosocial stress and social support, *Journal of Public Health Medicine*, 18, 221-231.
12. Cohen, S., Janicki-Deverts, D., Chen, E., & Matthews, K.. A. (2010). Childhood socioeconomic status and adult health. *Annals of The New York Academy of Sciences*, 1186, 37-55.
13. Cacioppo, J. T. et al (2002). Loneliness and health: Potential mechanisms, *Psychosomatic Medicine*, 64, 407-417.

14. Kunz-Ebrecht, S. R., Kirschbaum, C. & Steptoe, A. (2004). Work stress, socioeconomic status and neuroendocrine activation over the working day. *Social Science & Medicine*, 58, 1523-1530.
15. O'Connor, D. B. et al. (2008). Effects of daily hassles and eating style on eating behavior. *Health Psychology*, 27, S20-S31.
16. Bellingrath, S. & Kudielka, B. M. (Effort-reward-imbalance and overcommitment are associated with hypothalamus-pituitary-adrenal (HPA) axis responses to acute psychosocial stress in healthy working schoolteachers. *Psychoneuroendocrinology*, 33, 1335-1343.
17. De Lange, A.H. et al. (2009). A hard day's night: a longitudinal study on the relationships among job demands and job control, sleep quality and fatigue. *Journal of Sleep Research*, 18, 374-383.
18. Kashani, M., Eliasson, A., Chrosniak, L., & Vernalis, M. (2010). Taking aim at nurse stress: A call to action, *Military Medicine*, 175, 96-100.
19. Hennessy, D. A. (2008). The impact of commuter stress on workplace aggression, *Journal of Applied Social Psychology*, 38 (9), 2315-2335.
20. Rozanski, A. & Kubzansky, L. D. (2005). Psychologic functioning and physical health: A paradigm of flexibility. *Psychosomatic Medicine*, 67, Supplement 1, S47-S53.
21. Kubzansky, L. D. et al. (2005). The clinical impact of negative psychological states: Expanding the spectrum of risk for coronary artery disease. *Psychosomatic Medicine*, 67, S10-S14.
22. Richman, L. S. et al (2005). Positive Emotion and Health: Going beyond the negative, *Health Psychology*, 24, 422-429.
23. Kubzansky, L. D. et al (2001). Is the glass half empty or half full: A prospective study of optimism and coronary heart disease in the normative aging study. *Psychosomatic Medicine*, 63, 910-916.
24. Jackson, B. et al. (2007). Does Harboring Hostility Hurt? Associations Between Hostility and Pulmonary Function in the coronary artery risk development in (young) adults (CARDIA) study. *Health Psychology*, 26, 333-340.
25. Alba, J. W. & Hasher, L. (1983). Is memory schematic? *Psychological Bulletin*, 93, 203-231.
26. Lampinen, J. M. et al. (2001). Recollections of things schematic: Room schemas revisited. *Journal of Experimental Psychology: Learning, Memory and Cognition*, 27, 1211-1222.
27. Fedoroff, I. C., et al (2000). Cognitive factors in traumatic stress reactions: Predicting PTSD symptoms from anxiety sensitivity and beliefs about harmful events. *Behavioural and Cognitive Psychotherapy*, 28, 5-15.

28. Kiviniemi, M. T., Voss-Humke, A. M. & Seifert, A. L. (2007). How do I feel about the behavior? The interplay of affective associations with behaviors and cognitive beliefs as influences on physical activity behavior. *Health Psychology, 26*, 152-158.
29. Borkovec, T. D., Ray, W. J., Stober, J. (1998). Worry: A cognitive phenomenon intimately linked to affective, physiological, and interpersonal processes, *Cognitive Therapy and Research, 22*, 561-576..
30. Bosch, N. M. et al (2009). Preadolescents' somatic and cognitive-affective depressive symptoms are differentially related to cardiac autonomic function and cortisol: The TRAILS study. *Psychosomatic Medicine, 71*, 944-950.
31. Pace, T.W.W. & Heim, C. M. (2011). A short review on the psychoneuroimmunology of posttraumatic stress disorder: From risk factors to medical comorbidities. *Brain, Behavior, and Immunity, 25*, 6-13.
32. Calhoun, P. S., Bosworth, H. B., Siegler, I. C., & Bastian, L. A. (2001). The relationship between hostility and behavioral risk factors for poor health in women veterans. *Preventive Medicine, 33*, 552-557.
33. Campbell-Sills, L. Chana, S. L. & Stein, M. B. (2006). Relationship of resilience to personality, coping and psychiatric symptoms in young adults, *Behavioural Research and Therapy, 44*, 585-599.
34. Folkman, S. et al., (1986). Dynamics of a stressful encounter: cognitive appraisal, coping and encounter outcomes. *Journal of Personality and Social Psychology, 50*, 992-1003.
35. Folkman, S & Moskowitz, J. T. (2000). Positive affect and the other side of coping. *American Psychologist, 55*, 647-654.
36. Billings, D. W., Folkman, S., Acree, M., & Moskowitz, J. T. (2000). Coping and physical health during caregiving: the roles of positive and negative affect. *Journal of Personality and Social Psychology, 79*, 131-142.
37. Prochaska, J. O., DiClemente, C. C., & Norcross, J. C. (1992). In search of how people change: Applications to addictive behaviors. *American Psychologist, 47*, 1102-1114.
38. Schwarzer, R. and Luszczynska, A. (2008). How to overcome health-compromising behaviors: The health action process approach. *European Psychologist, 13*, 141-151
39. Chafin, S. Christenfeld, N., & Gerin, W. (2008). Improving cardiovascular recovery from stress with brief poststress exercise. *Health Psychology, 27*, S64-S72.
40. Macan, T.H., Shahani, C, Dipboye, R. L. & Phillips, A. P. (1990). College students' time management: correlations with academic performance and stress, *Journal of Educational Psychology, 4*, 760-768.

---

### **Participation Grade Guidelines**

**Contributions to class discussion** and dynamics are assessed in a number of ways. These following criteria will be used for the participation grade:

**10/10-Excellent**

- Listens attentively and is engaged in class discussion. Moves discussion forward productively by adding new information about the topic, disputing or questioning points under discussion, changing the topic when appropriate, noting exceptions, and/or providing some observations from personal experience.
- Varies the type of contribution to discussion. Acknowledges and confirms the contributions of others by restating or referring to their points, asking for clarification, respectfully disagreeing with them.
- Is sensitive to the dynamics of the group.
- Actively works to keep the discussion productive so that learning can occur and encourages others to contribute to discussions.

**8-9/10-Good**

- Listens attentively. Talks in such a way that discussion goes forward by adding new information, questioning or disputing, changing topic when appropriate, noting exceptions, and/or providing personal experience.
- Varies type of contribution. Acknowledges the contributions of others, is respectful, and does not dominate the discussion.

**6-7/10-Satisfactory**

- Listens attentively. Talks with the intention of moving conversation forward (see above).
- Contributions may tend to one type (e.g., personal observations, etc.) but demonstrates some sensitivity to group dynamics.
- Is respectful of others.

**4-6/10—Poor**

- Any of the following: Does not listen attentively (e.g., whispers to neighbors, reads, writes or is using electronic devices inappropriately during discussions).
- Interrupts others.
- Talks extremely infrequently (e.g., less than once a day). Is limited to one type of contribution (e.g., disputing or questioning, talking from personal experience) with little sensitivity to group dynamics.
- Dominates conversation in a way that is resented by others.

**1-3/10—Very Poor**

- Any of the following: Talks infrequently, once or twice a week.
- Demonstrates lack of respect for others.

**0/10—Absent/uninvolved**

- Missing class frequently (beyond 3 absences)
- Any of the above under “Very Poor”